

stable oil and emulsifier composition having a relatively large percentage of vegetable oil. One problem with producing a foam which is effective for providing protection for a plant from injury caused by frost or freezing temperatures is the difficulty of providing a stable oil and emulsifier composition having a relatively large percentage of vegetable oil. This is particularly true for compositions comprising crude, non-refined vegetable oils. Emulsifiers which have been found to be particularly suitable are alkyl, aryl or glycol ethoxylate, propoxylate, butoxylate or sulfonate-based emulsifiers.

REMARKS

The Amendment and Response is being filed after the six-month response time due to the fact that the subject Office Action was never received by the Applicants. The Applicants would like to thank Examiner Pryor for sending a copy of the Office Action to the Applicants on June 18, 2002 and for the telephone interview of July 8, 2002.

The rejection of Claims 25-27 under 35 U.S.C. 103(a) in view of JP '992 as applied to claims 1 - 3, 7, 15 and 17 and in view of JP '097 or Blandiaus et al. (U.S. 5,958,852) is respectfully traversed.

The Examiner takes the position that the claim is drawn to a composition, the intended use of the composition's individual components has no patentable significance. Therefore, a statement defining alkyl oxyalkylate as a foaming agent has no patentable weight. The combination or references result in a composition comprising alkyl oxyalkylate.

The Applicants respectfully submits that the Examiner is correct in his position that the intended use of the component's individual components has no patentable significance. However,

the Applicants respectfully submits that all of the cited references teach detergent compositions and while one may be motivated to combine or modify the teachings of the cited references to develop a detergent, there is no teaching or suggestion in the cited references that would motivate one skilled in the art of detergents to combine or **modify** the teachings of the cited references to arrive at a composition for protecting plants from frost or freezing temperatures.

Even if one is motivated to combine the cited references to arrive at a new detergent, Claim 25 is directed to a composition comprising a pre-emulsion concentrate comprising a **crude vegetable oil**, an emulsifier, a foaming agent and water. The term "crude" as used in the present invention refers to a non-refined oil which one skilled in the art would recognize is typically less expensive than refined vegetable oils and is therefore more desirable for use in large quantities such as needed for agricultural uses. Further, "crude" vegetable oils, especially crude soya oil, contain tocopherol which is a natural antioxidant and functions as a preservative. This permits the foam producing composition of the present invention. It has been found that such oils can be stored for use without or with little additional preservatives. Crude vegetable oils also contain soluble gums or vegetable oil soluble gums which improve the oil's stickability or adhesion characteristics thereby increasing the ability of the foam to cling to the plant's surface (See page 9, lines 8 - 18). The Applicants respectfully submit that there is nothing in the prior art references that the disclosed compositions comprise **crude vegetable oil** or the desirability of using crude vegetable oils. Compositions comprising a large percentage of **crude vegetable oil** have not been utilized because of the difficulties in formulating a stable pre-emulsion concentrate (See page 10, lines 1 - 6) the difficulty of providing sufficient water dispersibility, and the tendency for vegetable oils to

biodegrade (go rancid) during use. The Applicants submit that such difficulties would *teach away* from using a crude vegetable oil, particularly for use in detergents where the benefits of using a “crude” oil is not as apparent.

Accordingly, the Applicants respectfully submit that Claims 25-27 are not made obvious in view of JP ‘992 as applied to claims 1 - 3, 7, 15 and 17 and in view of JP ‘097 or Blandiaus et al. (U.S. 5,958,852).

In view of the foregoing, the Applicants respectfully submits that Claims 25-27 under 35 U.S.C. 103(a) in view of JP ‘992 as applied to claims 1 - 3, 7, 15 and 17 and in view of JP ‘097 or Blandiaus et al. (U.S. 5,958,852) should be withdrawn.

The rejection of Claims 35, 42-44 under 35 U.S.C. 103(a) as being unpatentable over Henriet et al. is respectfully traversed.

The Examiner has previously taken the position that Henriet et al. discloses a method for treating crops with a composition comprising a **pesticide**, vegetable oil, an emulsifying system, and water. The Examiner also took the position that with respect to the amount of vegetable oil required, one having ordinary skill in the art at the time the invention was made would have determined the optimum amount of vegetable oil through routine experimentation. One would have been motivated to do this so that the most effective composition would have been developed.

The Applicants again respectfully submit that the composition of Henriet comprises a **pesticide**, a vegetable oil solvent and an emulsifying surfactant. In contrast, the composition of Claim 35 **consists essentially of** about 40% to about 90% by weight of vegetable oil and an emulsifier. Claim 42 is a method of treating plants comprising the steps of **producing a pesticide**

comprising about 40% to about 90% by weight of vegetable oil and an emulsifier.... Thus vegetable oil is the **principal component of the composition**. In contrast, the vegetable oil of Henriët operates as a **solvent** for the pesticide. The examiner now takes the position that in the absence of unexpected results, the claims are not allowable. Applicant must show the criticality of 40 - 90% vegetable oil.

The Applicants submit that the **“active ingredient”** of Henriët et al. is the **pesticide** components. There is no teaching that the vegetable oil operates as a pesticide. Indeed, one would assume that the desired amount of vegetable oil for use as a solvent would be only that necessary to operate as a solvent for the pesticide. In contrast, in the composition of Claim 35, the **“active ingredient”** is the **vegetable oil** which operates as the **pesticide**. In Claim 42, the method describes **producing a pesticide** comprising about 40% to about 90% vegetable oil. The Applicant respectfully submits that the Examiner has not considered the benefits over the prior art or the ability of producing a simple, biodegradable product that uses vegetable oil that operates as a pesticide rather than using a **pesticide** that may be harmful to the environment. It is a basic tenet of patent law that one is not permitted to ignore the results and advantages produced by claimed subject matter simply because the claim limitations **may be similar** to those of the prior art. Obviousness determinations must include consideration of the invention as a whole, including its structure, its properties, and the problem it solves.

Further, it is well known that a prior art reference must be sufficiently definitive to put the public in possession of the claimed invention before it can be used to render an invention obvious. The Applicant respectfully submits that while the cited reference discloses the use of vegetable oil

as a solvent for a pesticide composition, it does not teach or suggest the pesticide benefits of a vegetable oil or the amount of vegetable oil necessary to achieve such benefits. Even if one could find in the prior art some teaching of the pesticide properties of vegetable oil, the Applicants respectfully submit that one would be required to completely modify the entire composition of Henriet to arrive at the claimed apparatus.

The Applicants have developed a novel method of spraying plants using a composition comprising vegetable oil and an emulsifier **to form a pesticide**. Whereas, Henriet supplies a **preformed pesticide**. Without any teaching or disclosure of the advantages of the claimed invention, the Applicant respectfully submits that the cited reference would not prompt one skilled in the art to use the limited teaching of Henriet to arrive at the claimed invention. Indeed, the use of a pesticide in Henriet **teaches away** from forming a pesticide from a vegetable oil. At best, the Examiner can only show that one skilled in the art may find it *obvious to try* to modify the teachings of Henriet along the lines of the subject invention. However, it is well known that “obvious to try” is **not the proper basis for rejecting a claim** under Section 103 and will not support a case of prima facie obviousness.

In view of the foregoing, the rejection of Claims 35, 42-44 under 35 U.S.C. 103(a) as being unpatentable over Henriet et al. Should be withdrawn.

The objection to Claims 1-5, 7-13, 15-24 under 35 U.S.C. 112, first paragraph, is respectfully traversed.

The Examiner takes the position that because the specification, while being enabling for instant emulsifiers, foaming agents, vegetable oils in the instant specification, it does not reasonably

provide enablement for all other emulsifiers, foaming agents, and vegetable oils not disclosed in the instant specification.

The Applicants respectfully submit that the specification has been amended and makes it more clear that the invention as claimed is limited to those emulsifiers, foaming agents, and vegetable oils identified in the subject application and their equivalents.

Accordingly, the objection of Claims 1- 5, 7-13, 15-24 under 35 U.S.C. 112, first paragraph should be withdrawn.

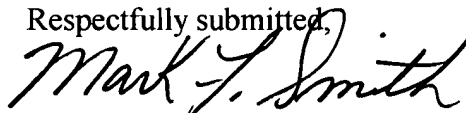
The objection of Claims 28-32, 45-47 as being objected to as being dependent upon a rejected base claim is respectfully traversed.

The Applicants at this time will not amend the subject claims to place them in independent form, including all of the limitations of the base claim and any intervening claims, until the Examiner has been able to respond to the arguments made hereinabove.

In view of the foregoing amendments and remarks, it is respectfully submitted that all of the Claims now pending are allowable over the art of record. Reconsideration of all claims now in this application is respectfully requested.

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MARKED UP COPY OF AMENDMENTS TO THE SPECIFICATION

Page 9, lines 2 - 18

The present invention for protecting plants from injury caused by frost or freezing temperatures comprises an insulating foam effective for providing a blanket or insulating layer along the surface of the plants to be protected. The insulating foam is produced from a composition comprising a vegetable oil and a foaming agent. Preferably, the vegetable oil comprising the insulating foam is soya oil, however, other suitable vegetable oils [include] are coconut oil, corn oil, cottonseed oil, palm oil, rapeseed oil, and sunflower oil. In addition, the vegetable oil is preferably a crude, non-refined or nonpurified oil. It should now be apparent to one skilled in the art that the use of a crude, non-refined vegetable oil as a base component will be significantly less expensive than using a refined or a purified vegetable oil. Further, crude vegetable oils, especially crude soya oil, contain tocopherol which is a natural antioxidant and functions as a preservative. This permits the foam producing composition to be stored for use without or with the use of significantly less additional preservatives. Crude vegetable oils also contain gums which improve the oil's stickability or adhesion characteristics thereby increasing the ability of the foam to cling to the plant's surfaces. In this way, the composition may also be used as an adjuvant to assist in the adhesion and spreading of growth regulators such as ethylene, and pesticides such as mineral oil and malathion.

Page 9, lines 19-21 and page 10, lines 1-6:

The insulating foam is produced from a composition comprising an oil and water emulsion prepared from a pre-emulsion concentrate using an emulsifier which is suitable for providing a stable oil and emulsifier composition having a relatively large percentage of vegetable oil. One problem with producing a foam which is effective for providing protection for a plant from injury

caused by frost or freezing temperatures is the difficulty of providing a stable oil and emulsifier composition having a relatively large percentage of vegetable oil. This is particularly true for compositions comprising crude, non-refined vegetable oils. Emulsifiers which have been found to be particularly suitable [include] are alkyl, aryl or glycol ethoxylate, propoxylate, butoxylate or sulfonate-based emulsifiers.